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S/056/62/042/003/034/049
B102/B138

AUTHORS: Zhdanov, V., Kagan, Yu., Sazykin, A.

TITLE: Effect of viscous momentum transfer on diffusion in a gas mixture

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 3, 1962, 857 - 867

TEXT: A theoretical investigation of the diffusion of a multi-component gas mixture is given when assuming viscous momentum transfer. The well-known method of moments by H. Grad (Comm. Pure and Appl. Math. 2, 331, 1949) is applied and the general system of diffusion equations is derived in the "13-moment" approximation. The relations obtained make it possible to analyze the effects of viscous momentum transfer on the diffusion. The calculations are carried out on the assumption that $\lambda/L \ll 1$ and $\tau/T \ll 1$; λ and τ are the mean free path and time, resp. and L and T are the characteristic length and time parameters of the changes in the mixture. The distribution function of the component α in a gas mixture is expanded into a series of Hermite polynomials $H^{(s)}_{\alpha i_1 \ldots i_s}(\vec{c}_\alpha)$;

Card 1/4

$$f_\alpha(\mathbf{r}, \mathbf{v}_\alpha, t) = f_\alpha^{(0)} \sum_{s=0}^{\infty} \frac{1}{s!} \left(\frac{m_\alpha}{kT}\right)^s A^{(s)}_{\alpha i_1 \ldots i_s}(\mathbf{r}, t)\, H^{(s)}_{\alpha i_1 \ldots i_s}(\mathbf{c}_\alpha); \qquad (2.1)$$

$$f_\alpha^{(0)} = \left(\frac{m_\alpha}{2\pi kT}\right)^{3/2} \exp\left(-\frac{m_\alpha c_\alpha^2}{2kT}\right), \qquad \mathbf{c}_\alpha = \mathbf{v}_\alpha - \mathbf{u},$$

$$A^{(s)}_{\alpha i_1 \ldots i_s}(\mathbf{r}, t) = \int H^{(s)}_{\alpha i_1 \ldots i_s}(\mathbf{c}_\alpha) f_\alpha \, d\mathbf{v}_\alpha.$$

m and $\vec{v}$ are mass and velocity of molecules, $\vec{u}(r,t)$ is the macroscopic velocity of the gas mixture as a whole. In the approximation of 13 moments this distribution function can be represented as

$$f_\alpha = f_\alpha^{(0)} \left\{ n_\alpha + (1/kT) j_{\alpha i} c_{\alpha i} + (\rho_\alpha / 2kT p_\alpha) p_{\alpha ik} (c_{\alpha i} c_{\alpha k} - (kT/m_\alpha)\delta_{ik}) + \right.$$
$$\left. + \tfrac{1}{6} (\rho_\alpha / kT p_\alpha) h_{\alpha i} c_{\alpha i} [(m_\alpha c_\alpha^2 / kT) - 5] \right\}, \qquad (2.6)$$

For the variations in time and in displacement coordinates a closed set of differential equations is obtained which describes diffusion, thermal conductivity, viscosity and their mutual relations. The final and general system of diffusion equations is obtained as

Card 2/4

$$\sum_{\beta}\frac{n_\alpha n_\beta kT}{n\,|D_{\alpha\beta}|_1}(u_{\alpha l}-u_{\beta l})=-\left[\frac{\partial p_\alpha}{\partial x_l}-\frac{\rho_\alpha}{\rho}\frac{\partial p}{\partial x_l}\right]+\left[n_\alpha X_{\alpha l}-\frac{\rho_\alpha}{\rho}\sum_{\beta}n_\beta X_{\beta l}\right]+$$

$$+\sum_{\beta}\xi_{\alpha\beta}\left(\frac{\lambda_\alpha}{m_\alpha n_\alpha}-\frac{\lambda_\beta}{m_\beta n_\beta}\right)\frac{\partial T}{\partial x_l}+2\left[\eta_\alpha-\frac{\rho_\alpha}{\rho}\eta\right]\frac{\partial e_{lk}}{\partial x_k}+$$

$$+\frac{4}{5}k\left(\frac{T}{p}\right)^2\sum_{\beta=1}^{N}\sum_{\delta=1}^{N}\xi_{\alpha\beta}\eta_\delta\left[\frac{|b|_{\delta\beta}}{m_\beta|b|}-\frac{|b|_{\delta\alpha}}{m_\alpha|b|}\right]\frac{\partial e_{lk}}{\partial x_k}-$$

$$-k\left(\frac{T}{p}\right)^2\sum_{\beta=1}^{N}\sum_{\delta=1}^{N}\sum_{\nu=1}^{N}\frac{kT}{m_\delta}\xi_{\alpha\beta}\xi_{\delta\nu}\left(\frac{|b|_{\delta\beta}}{m_\beta|b|}-\frac{|b|_{\delta\alpha}}{m_\alpha|b|}\right)(u_{\nu l}-u_{wl}),\qquad(3.8)$$

The equations obtained are used to investigate the diffusion in a two-component mixture. Several formulas for the barodiffusion constant α_p are derived. In the Kihara approximation

$$\alpha_p=\frac{9A^*}{5+3A^*}\left[1+\frac{(6C^*-5)(25+25A^*-18A^{*2})}{24A^{*2}(5+2A^*)}\right]\frac{m_2-m_1}{m_2+m_1}-$$

$$-\frac{6A^*}{5+3A^*}\left[1-\frac{5(6C^*-5)(1+3A^*)}{12A^*(5+2A^*)}\right]\frac{\sigma_2-\sigma_1}{\sigma_{12}}.\qquad(4.10)$$

is obtained for a viscous flow of an arbitrary binary mixture; for an incompressible liquid

Card 3/4

$$\alpha_p = p\left(\frac{\partial\mu}{\partial p}\right)_{y_i,T} \Big/ \left(\frac{\partial\mu}{\partial y_1}\right)_{p,T} y_1(1-y_1) + kTc \Big/ 2\eta D_{12} y_1(1-y_1).$$

is obtained. y is the molar concentration, μ the chemical potential,

$$p_{\alpha ik} = -2\eta_\alpha e_{ik}, \quad \eta_\alpha = y_\alpha \sum_{\beta=1}^{N} \frac{y_\beta |a|_{\beta\alpha}}{|a|} \quad (3.6).$$

$|\alpha_p|$ depends significantly on the nature of the interaction between the molecules and can have any sign. The cause of the difference between the value of α_p obtained and

$$\alpha_p = (m_2 - m_1)/[m_1 y_1 + m_2(1-y_1)]. \quad (4.6)$$

obtained by irreversible thermodynamical methods is discussed. There are 1 figure and 10 references: 2 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: C. Muckenfuss, C. Curtiss. J. Chem. Phys., 29, 1273, 1958; T. Kihara. Rev. Mod. Phys. 25, 873, 1953; C. Curtiss, J. Hirschfelder. J. Chem. Phys. 17, 550, 1949; S. Chapman, T. Cowling. Proc. Phys. Soc. A179, 159, 1941.

SUBMITTED: October 9, 1961

Card 4/4

ZHDANOV, V.

Offices for managing apartment houses in Ryazan. Zhil.-kom. khoz. 8 no. 6:17-18 '58. (MIRA 11:7)

1. Zaveduyushchiy oblastnym otdelom kommunal'nogo khozyaystva.
(Ryazan--Apartment houses--Maintenance and repair)

ZHDANOV, V., gvardii mayor

Complaints about the automatic small arms assembly. Voen. vest. 40 no.11:103 N '60. (MIRA 14:11)
(Targets(Military science))

ZHDANOV, V.

Virus and a cell. Nauka i zhyttia 12 no.11:28-29 N '62.
(MIRA 16:1)

1. Deystvitel'nyy chlen AMN SSSR, direktor Instituta virusologii im. Ivanovskogo AMN SSSR.
(VIRUSES) (CELLS)

ZHDANOV, V.; PETROV, V.

Liquified gas in the service of agriculture. Sel'.stroi. no.11:9-10 N '62. (MIRA 15:12)

1. Zaveduyushchiy Ryazanskim oblastnym otdelom kommunal'nogo khozyaystva (for Zhdanov). 2. Upravlyayushchiy trestom Ryazan'oblgaz (for Petrov).
(Ryazan Province--Liquefied petroleum gas)

ZHDANOV, V.

District centers of Ryazan Province improve their appearance. Zhil.-kom. khoz. 10 no.5:8-9 '60. (MIRA 13:10)

1. Zaveduyushchiy oblastnym otdelom kommunal'nogo khozyaystva, Ryazan'.

(Ryazan Province--Municipal services)

ZHDANOV, V., prof.; RITOVA, V., doktor med.nauk

How to prevent outbreaks of grippe. Okhr.truda i sots.strakh. no.4: 62-65 O '58. (MIRA 12:1)

1. Chlen-korrespondent akademii meditsinskikh nauk SSSR (for Zhdanov). (INFLUENZA)

ZHDANOV, V., prof.

Don't relax the struggle against grippe. Okhr.truda i sots. strakh. 3 no.2:63-65 F '60. (MIRA 13:6)

1. Zamestitel' ministra zdravookhraneniya SSSR.
(Influenza)

ZHDANOV, V.

Operation of pumping and hydroelectric station units. Moskva, Izd-vo Ministerstva rechnogo flota SSSR, 1953. 202 p. (54-20499)

TK1081.Z48

ZHDANOV, V.

Katalog-spravochnik po nasosam. Moskva, Ugletekhizdat, 1949. 312 p. illus.

Catalog-handbook of pumping machiner.

DLC: TJ902.248

SO: Manufecturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

ZHDANOV, V.

Catalog - reference-book on pumps. Moskva, Upletekhizdat, 1929. 312 p.
(50-34220)

TJ902.Z48

ZHDANOV, V., mayor

Firing at moving targets. Voen. vest. 43 no.5:77-78
My '64. (MIRA 17:6)

ZHDANOV, V.; KHRISTOV, L.; MURAV'YEV, M.; RYZHOV, A.; VASHKOV, V.; FEDOSOVA, A. POGODINA, L.; KLECHETOVA, A.; SUHBOTIN, A.; ZAKHAROVA, Ye.; GANDEL'SMAN, B.; SAZONOVA, N.; ZHVAKINA, I.; KUDRINSKIY, I.; MISKAROV, D.; KHANENYA, F.

Professor A.N.Tregubov; obituary. Gig. i san. 21 no.10:63 O '56. (MLRA 9:11)

(TREGUBOV, ALEKSANDR NIKOLAEVICH, 1888-1956)

ZHDANOV, V.; KAGAN, Yu.; SAZYKIN, A.

Effect of viscous transfer of momentum on diffusion in a gaseous mixture. Zhur.eksp.i teor.fiz. 42 no.3:857-867 Mr '62. (MIRA 15:4)

(Diffusion) (Gases) (Thermodynamics)

ZHDANOV, V.

"Thirty-five years of the Soviet Public Health Service in working with epidemics." Tr. from the Russian. p.99. (NEPEGESZSEGUGY, Vol. 34, no. 4 April, 1953, Budapest.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress, Aug. 1953, Uncl.

ZHDANOV, V.

Zaraznye Bolez Ni Cheloveka (Human Infectious Diseases)

255 p. 1.50

SO: Four Continent Book List, April 1954

ZHDANOV, V., mladshiy serzhant zapasa, radiolyubitel'

Help to organize a radio club. Radio no.6:15 Je '65.

(MIRA 18:10)

ZHDANOV, V. A. and TSEGEL'SKII, V. L.

Elektrosvarochnoe delo. Izd. 3. Moskva, Mashgiz, 1944. 384 p.

Electric welding.

SO: Manufacturing and Mechanical Engineering in the Soviet Union. Library of Congress, 1953.

ZHDANOV, VADIM ALEKSANDROVICH and V. L. TSEGEL'SKII.

Tekhnologiia dugovoe elektrosvarki. Dop...v kachestve uchebnika dlia tekhnikumov svarochnoi spetsiial'nosti. Moskva, Mashgiz, 1948. 339, (1) p. illus.

Bibliography: p. (340)

Technology of electric arc welding.

DLC: TK 4460.Z47

SO: Manufacturing and Mechanical Engineering in the Soviet Union. Library of Congress, 1953.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 518 - I

BOOK Call No.: AF 645849

Authors: TSEGAL'SKIY, V. L. and ZHDANOV, V. A.

Full Title: ELECTRIC WELDING, 4th ed.

Transliterated Title: Elektrosvarochnoye delo, izd. chet.

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House of Machine-Building and Shipbuilding Literature (Mashgiz)

Date: 1954 No. pp.: 375 No. of copies: 25,000

Editorial Staff

Editor: Shafit, Yu. Ya., Eng. Appraiser: Rybalka, P. G., Eng.

Prof. G. F. Skakun, Kand. of Tech. Sci. is the author of Chapter XVIII (Resistance Welding)

PURPOSE: To help foremen and welders to acquire basic theoretical knowledge, to acquaint them with modern machinery and technique.

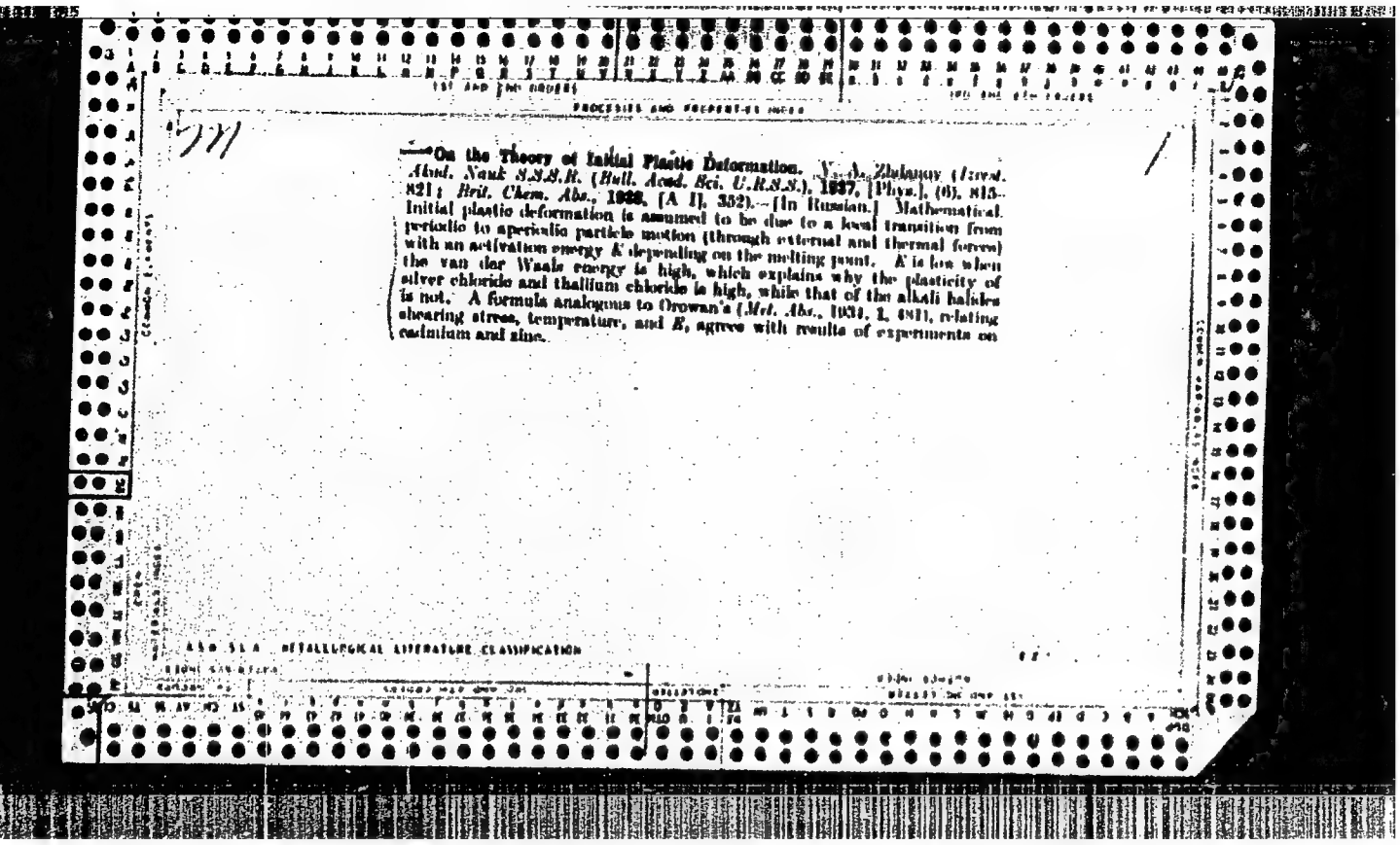
TEXT DATA

Coverage: This edition differs from the original 1944 text in that the chapter on oxy-acetylene welding was omitted, and new chapters on carbon arc and resistance welding were added. The present edition comprehensively describes the machinery and tools, electrodes and other accessories used in electric welding and cutting of alloyed steels and nonferrous metals. Submerged electric arc welding and cutting, carbon arc welding, atomic hydrogen and argon arc weldings are briefly discussed. The chapter on resistance welding covers the equipment used and the technology of spot welding, seam welding, butt welding and projection welding. Welding by automatic and semi-automatic machines is given much attention. Welding shops,

quality control and safety measures, handling of tools and materials are also described. The book is profusely illustrated with diagrams, drawings, charts, etc.

No. of References: 30, all Russian or Ukrainian

Facilities: The Central Scientific Research Institute of Technology and Machine-Building (TsNIITMASH); the Electrical Welding Institute im. Academician E. O. Paton. A few scientists are mentioned.



On the Theory of Initial Plastic Deformation. V. A. Zhukov (*Izvest. Akad. Nauk S.S.S.R.* (*Bull. Acad. Sci. U.R.S.S.*), 1937, [Phys.], (6), 815–821; *Brit. Chem. Abs.*, 1938, [A I], 352).—[In Russian.] Mathematical. Initial plastic deformation is assumed to be due to a local transition from periodic to aperiodic particle motion (through external and thermal forces) with an activation energy E depending on the melting point. E is low when the van der Waals energy is high, which explains why the plasticity of silver chloride and thallium chloride is high, while that of the alkali halides is not. A formula analogous to Orowan's (*Met. Abs.*, 1934, 1, 481), relating shearing stress, temperature, and E, agrees with results of experiments on cadmium and zinc.

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

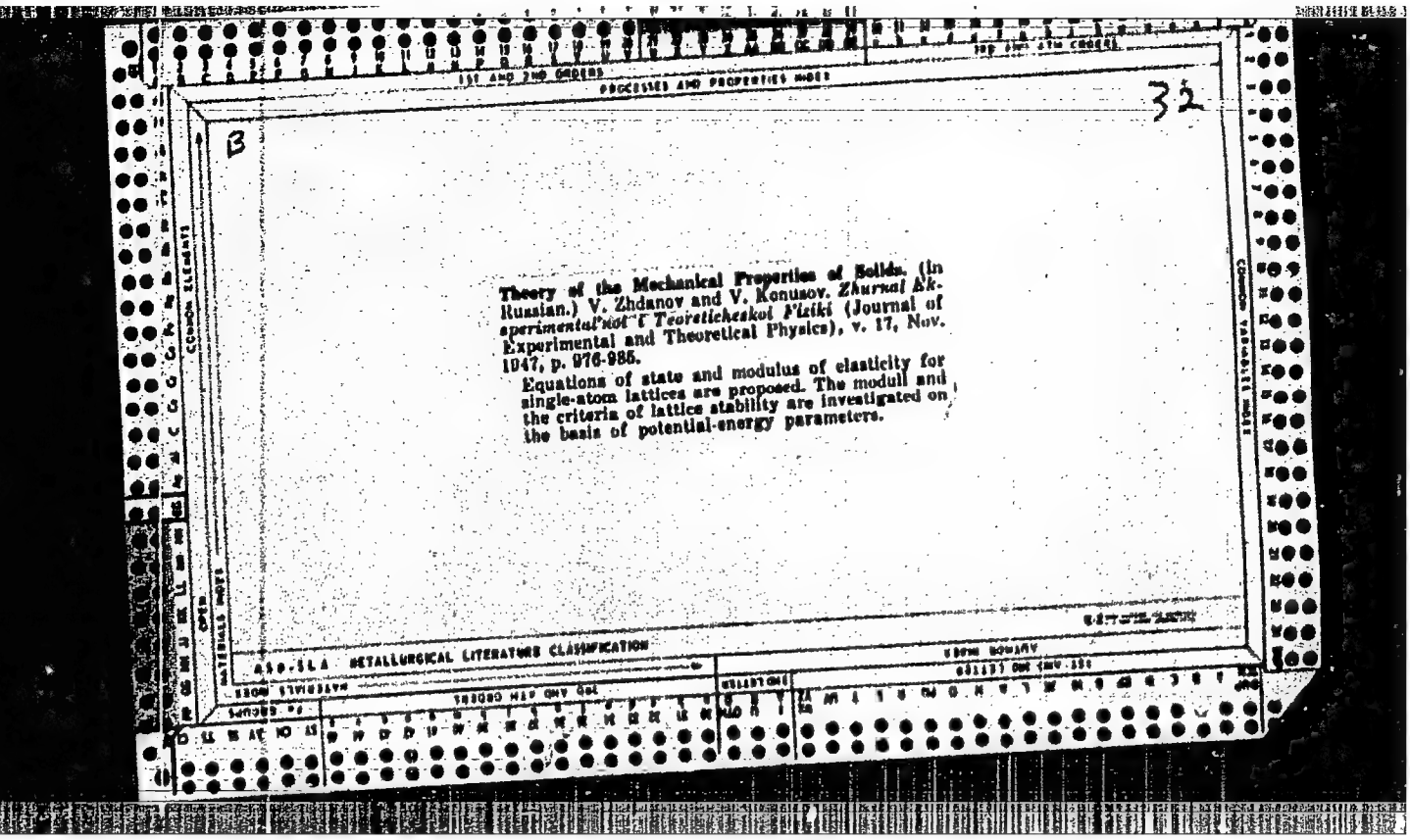
PROCESSES AND PROPERTIES INDEX

2

Effect of van der Waals interaction upon some properties of solid bodies. V. Zhdanov. *J. Exptl. Theoret. Phys. (U. S. S. R.)* 8, [illegible] (1938).—van der Waals interaction lowers the energy of transition of an oscillator from a state of periodic to aperiodic motion, and hence the m. p. of a substance, while it raises the plastic properties. A table gives the calcd. values of the van der Waals energy for the alkali and alk. earth elements.

F. H. Rathmann

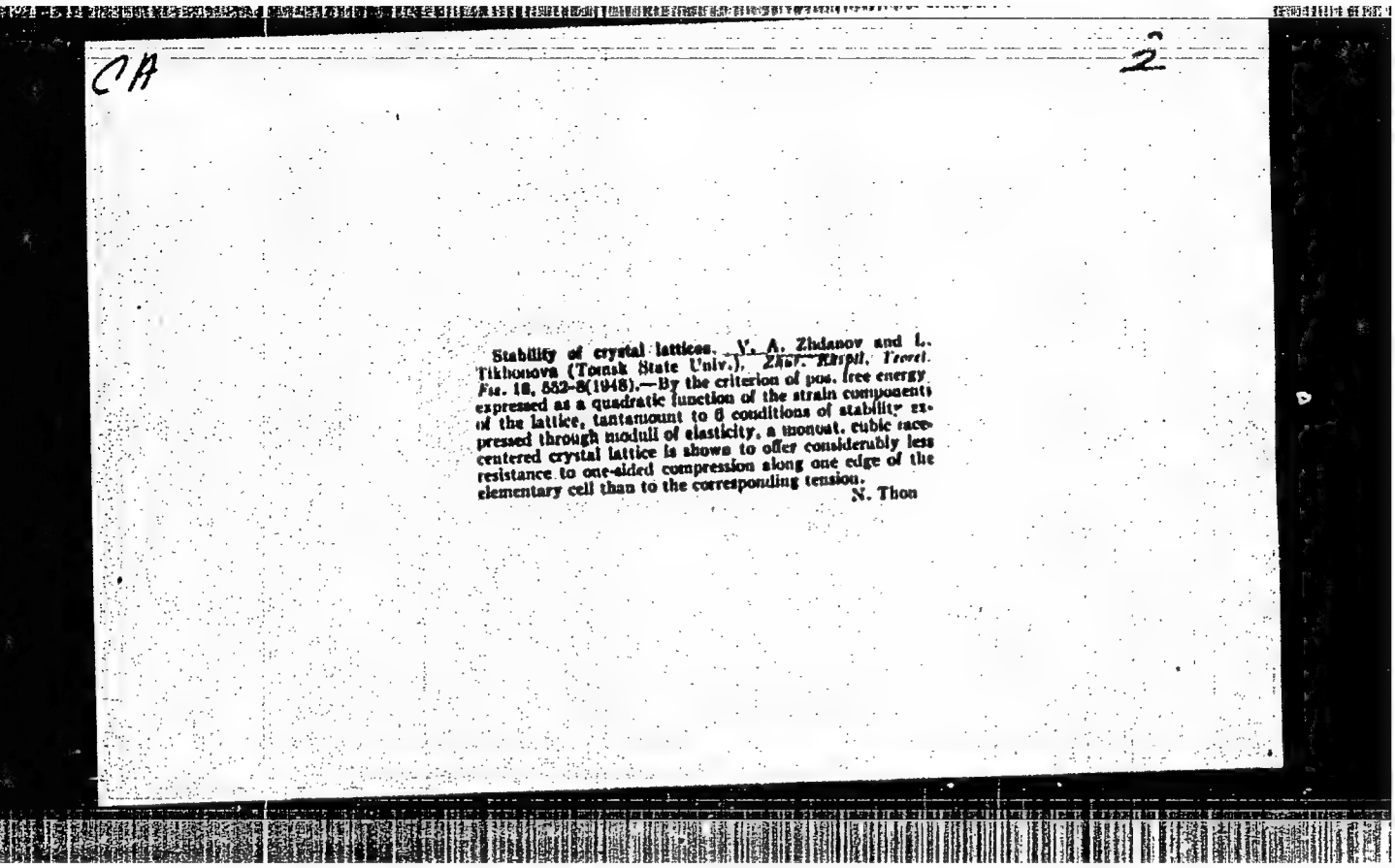
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



32

Theory of the Mechanical Properties of Solids. (In Russian.) V. Zhdanov and V. Konusov. *Zhurnal Eksperimental'noĭ i Teoreticheskoĭ Fiziki* (Journal of Experimental and Theoretical Physics), v. 17, Nov. 1947, p. 976-986.

Equations of state and modulus of elasticity for single-atom lattices are proposed. The moduli and the criteria of lattice stability are investigated on the basis of potential-energy parameters.



CA 2

Stability of crystal lattices. V. A. Zhdanov and L. Tikhonova (Tomsk State Univ.). *Zhur. Eksptl. Teoret. Fiz.* 18, 552-8(1948).—By the criterion of pos. free energy expressed as a quadratic function of the strain components of the lattice, tantamount to 6 conditions of stability expressed through moduli of elasticity, a monovat. cubic face-centered crystal lattice is shown to offer considerably less resistance to one-sided compression along one edge of the elementary cell than to the corresponding tension.

N. Thon

ZHDANOV, V. A.

Zhdanov, V. A. and Konusov, F. V. "On the theory of equalization of the crystal line state," Trudy Sib. fiz.-tekhn.in-ta, Issue 26, 1948, p. 78-88, - Bibliog: 7 items.

SO: U-5241, 17 December 1953, (Letopis 'Zhurnal 'nykh Statey, No. 26,1949)

1. KUZNETSOV, V. D.; ZHDANOV, V. A.

2. USSR (600)

4. Physics and Mathematics

7. Physical Fundamentals of Metal Science. By Ya. S. Yamanskiy, B. N. Finkel'shteyn, and M. Ye. Blanter. (Atomic Structure of Alloys, Moscow, Metallurgy Press, 1949). Reviewed by V. D. Kuznetsov, and V. A. Zhdanov. Sov. Kniga, No. 4, 1950.

9. [redacted] Report U-3081, 16 Jan. 1953. Unclassified.

Zhdanov, V. A. and Vishnenskaia, N. L., On the theory of stability of binary lattices. P. 231.

The stability of the binary body centered lattice is investigated on the assumption that the forces of the bond are central. It is shown that at transition from the monoatomic lattice, unstable on account of the absence of resistance to shifts, to the binary lattice, in the latter already at very small difference of particles, a strong resistance to shifts appears.

The Siberian Physico-Technical Inst.
at the Tomsk State University
September 21, 1948

SO: Journal of Experimental and Theoretic Physics (USSR) 19, No. 3 (1949)

ZHDANOV, V. A.

155T59

USSR/Physics - Crystal Lattices Jan 50

"Stability of Crystal Lattices During Displacements," V. A. Zhdanov, V. F. Konusov, Siberian Physicotech Inst, Tomsk State U, 13 pp

"Zhur Eksper i Teoret Fiz" Vol XX, No 1

Discusses displacement deformation of a monatomic cubic face centered crystal lattice. Determines "strength of a lattice toward displacement" and work of displacement, or shifting. Shows a lattice resists least of all (and very weakly) a displacement in the (111) plane of the (112) direction, and internal shift, or distortion.

155T59

USSR/Physics - Crystal Lattices (Contd) Jan 50

appears during displacement process. Discusses influence upon stability of lattice for displacements of normal (all-sided and one-sided) stresses. Submitted 30 May 49.

155T59

ZHDANOV, V.A.

USSR/Physics - Crystallography Mar 52

"Theory of Mechanical Strength of Crystalline Lattices," V. A. Zhdanov, V. F. Konusov, Siberian Phys Tech Inst Tomsk State U

"Zhur Eksper i Teoret Fiz" Vol XXII, No 3, pp 339-349

Analyzes deformation of cubic face-centered lattice, conserving orthorhombic symmetry, equiv to a vol-centered lattice. Establishes that the deformation leads to the destruction or to a reorientation of the lattice. Evaluates activation energy in process of lattice reorientation. Received 21 Apr 51.

215T76

ZHDANOV, V. A.; CHEGLOKOV, Ye. I.

Crystallography

Theory of tetragonal binary lattices. Zhur. fiz. khim. 26, No. 3, 1952.

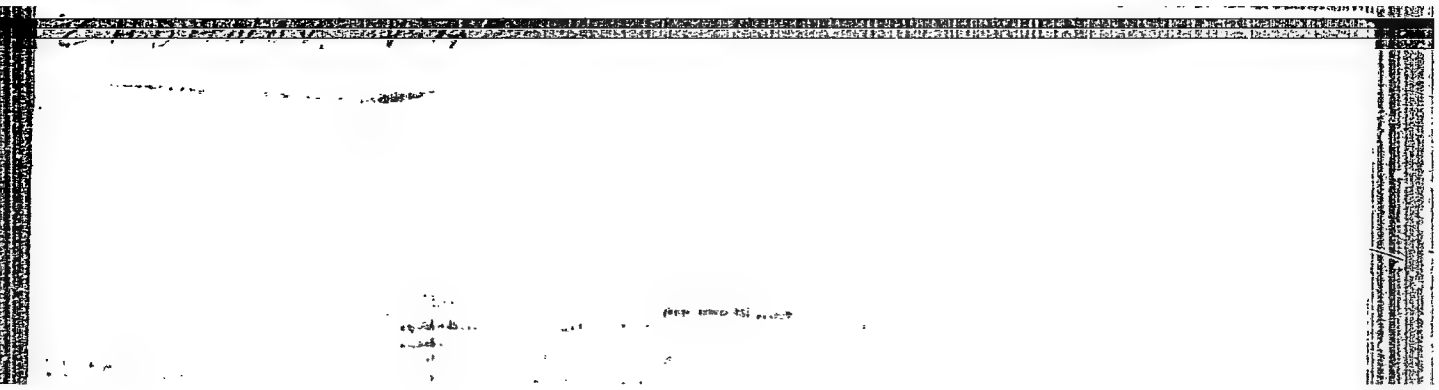
Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

phys 5

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
General and Physical Chemistry

Theory of crystal lattices of the NaTl type. V. A. Zhdanov and R. P. Mal'tsova (V. V. Kuibyshev State Univ., Tomsk). *Zhur. Fiz. Khim.* 27, 210–16(1953); cf. *C.A.* 47, 9361*h*.—The possibility of stable NaTl-type lattices was investigated by math. detn. of the conditions under which the lattice energy, considered as a function of unit-cell and internal displacement parameters, is a min. Conclusions are given in equations and graphs. LiIn, LiCd, LiZn, LiGa, NaTl, and NaIn are discussed. In a stable lattice the bond energies must decrease in the order *AB*, *AA*, *BB*. The formation of the NaTl-type lattice can be explained without assuming any change in character of the bonding forces.
J. W. Lowrberg, Jr.

3/26/54



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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620013-7"

Card 1/1

Authors : Zhdanov, V. A., and Pak En-bo.

Title : The Theory of Crystal Lattices, Type BiF_3.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 683-687, Apr 1954

Abstract : A brief study is presented on the structure of crystal lattices, type BiF_3, CsCl, and NaTl. The general evaluation of the binding forces of lattices, type CsCl and NaTl, permitted the comparison of these forces, which indicated that each [illegible] lower valence from the other. [illegible]

Institution : Siberian Physico-Chemical Institute at V. V. Kuybyshev's State University, Tomsk.

Submitted : June 25, 1953

ZHDANOV, V. A.

USSR/Chemistry

Card 1/1

Authors : Zhdanov, V. A., and Tskhay, M. .

Title : Theory of the Nickel-Arsenide Structures.

Periodical : Zhur. Fiz. Khim. Vol. 28, 688-691, Apr 1954

Abstract : The author presents formulas for determination of mechanical stability binding forces and genetic bonds between the NiAs and Ni$_2$In structures. The determination of [illegible] is performed with available method. [illegible]

Institution : Siberian Physico-Chemical Institute at V. . Kuybyshev's State University, Tomsk.

Submitted : June 25, 1953

USSR/Physical Chemistry - Crystals B-5

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3590

Author : Zhdanov V.A., Konusov V.F., Andreyeva L.G.
Inst : Sibirian Physico-Technological Institute at Tomsk University
Title : Contribution to the Theory of Stability and Mechanical Characteristics of Ionic Lattices of CsCl Type.

Orig Pub : Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1955, No 34, 219-230

Abstract : Considered are the stability conditions and mechanical characteristics of ionic lattices of CsCl type during different types of deformation. Thermal motion is not taken into account. For calculations the effective energy of interaction of ions is approximated by means of formula: $\varphi_{kk'} = (e_k e_{k'}/r_{kk'}) + (b_{kk'}/r_{kk'}^n)$ where e_k and $e_{k'}$ are charges of ions (k and k' = 1 and 2) $b_{kk'}$ and n are parameters. Region of stability of lattices of CsCl type (I)

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Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3590

is much narrower than that of lattices of NaCl type (II), to which is due, apparently, the relatively infrequent occurence of the former in nature. With a given n stability of lattices is determined by value of parameter $\beta \equiv (b_{11} + b_{22})/2b_{12} - 1$. If, for example, n = 8, then with $\beta \geq 6$ both lattices are unstable and cannot exist; in the interval $6 \geq \beta \geq \sim 0.7$ only II are stable; in the interval $-0.7 \geq \beta \geq -2.3$ both types of lattices are stable, but I is metastabile; in the interval $-2.3 \geq \beta \geq -2.5$ also both types of lattice exist but the II are metastabile, whereas in the interval $-2.5 \geq \beta \geq -3.7$ only II are stable, and with $\beta \leq -3.7$ neither I nor II can exist. Thus, in fact, I exists only within a short interval of β variations, having a width of 0.2. Analogous deductions are made also for other values of n.

ZHDANOV, V.A.

B-5

USSR/Physical Chemistry - Crystals

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 3591

Author : Zhdanov V.A., Brysneva L.A.
Inst : Sibirian Physico-Technological Institute at Tomsk University
Title : Contribution to the Theory of Crystal Lattices of Cu_3N, Cu_2O and CuF type.

Orig Pub : Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1955, No 34, 255-271.

Abstract : Investigated were the mechanical characteristics and the conditions of existence of lattices of the types Cu_3N (I), Cu_2O (II) and CuF (III). The structures under study are a part of that series of structures which is derived from cubic, face-centered, lattice by successive filling of its octahedral and tetrahedral voids (interpoints). They appertain to binary systems of A_pB_q type, wherein A are particles located at cubic, face-centered lattice

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points, and B are particles at its interpoints. The instance is considered, when lattice particles are bound by non-ionic forces and effective energy of their interaction is $\varphi_{kk'} = [n m \varphi^{\circ}_{kk'} / (n-m)][-(r^{\circ}_{kk'}/r_{kk'})^m + (n/m)(r^{\circ}_{kk'}/r_{kk'})^n]$, wherein $r_{kk'}$ is distance between particles, $n, m, \varphi^{\circ}_{kk'}$, and $r^{\circ}_{kk'}$ are parameters. It is assumed that $r^{\circ}_{BB} = \alpha$ r°_{AA} and $r^{\circ}_{AB} = r^{\circ}_{AA}(1+\alpha)/2$, where the parameter α reflects the "geometrical" differences between A and B. Stability of all lattices depends practically only upon α and $\gamma_2 \equiv \varphi^{\circ}_{AB}/\varphi^{\circ}_{AA}$. Region of stability of I is fairly wide and narrows only with $\alpha \approx 1$, when I is stable only with small values of γ_2. Stability of I is retained also when the lattice degenerates into a face-centered defective lattice. Conditions of existence of II are more exacting, and those of III are so much more

ZHDANOV, V.A.; KONUSOV, V.F.

Theory of the structure of binary crystals. Izv.vys.ucheb.zav.; fiz. no.3:45-54 '59. (MIRA 12:10)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V.Kuybysheva.
(Crystals)

ACCESSION NR: AP4041856 S/0139/64/000/003/0151/0157

AUTHORS: Zhdanov, V. A.; Konusov, V. F.

TITLE: On the theory of binding forces in metals

SOURCE: IVUZ. Fizika, no. 3, 1964, 151-157

TOPIC TAGS: binding energy, metal physical property, thermomechanical treatment, metallic crystal lattice

ABSTRACT: A general expression is obtained in the statistical approximation for the binding energy in a metal. It is necessary to resort to this approximation because strictly rigorous quantitative deduction on the binding forces of metals cannot be obtained by quantum-mechanical means. The expression obtained has a simple physical meaning and at the same time describes the features of the forces in specific metals. Some data on mechanical and thermomechanical properties of metals can be derived by making use of ex-

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ACCESSION NR: AP4041856

perimental data in conjunction with this expression. It is shown that the binding energy consists of the following: 1) Electrostatic energy of a system consisting of pointlike positive charges in sites of the crystal lattice, and a compensating negative charge distributed with constant density; 2) energy dependent on the volume of the lattice unit cell; 3) energy of the type of the paired central interaction. Shortcomings of some other approximations are discussed. In the general case the binding energy in the metal cannot be reduced to an energy of only paired and central interactions. The features of the metallic bond in concrete metals are determined both by the relative value of these individual parts of the binding energy, and by their concrete functional forms. Orig. art. has: 1 figure and 18 formulas.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuyby*sheva (Siberian Physicotechnical Institute at the Tomsk State University)

ACCESSION NR: AP4041856

SUBMITTED: 10Feb63 ENCL: 00

SUB CODE: MM, SS NR REF SOV: 002 OTHER: 004

Card 3/3

ZHDANOV, V.A.; KONUSOV, V.F.

Binding forces in metals. Part 1. Izv. vys. ucheb. zav.; fiz. 8 no.4:23-27 '65. (MIRA 18:12)

1. Sibirskiy fiziko-tekhnicheskiy institut imeni V.D. Kuznetsova. Submitted January 25, 1964.

ZHDANOV, V.A.; KONUSOV, V.F.

Theory of the binding forces in metals. Izv. vys. ucheb. zav.; fiz. no. 3:151-157 '64. (MIRA 17:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.

ZHDANOV, V.A.; KATAL'NIKOV, V.V.

Calculating the heat capacity of a CsCl-type lattice by the Houston method. Fiz. met. i metalloved. 16 no.1:148-149 Jl '63.
(MIRA 16:9)

1. Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut.
(Cesium chloride—Thermal properties)

ZHDANOV, V.A.; TRET'YAKOV, V.P.

Temperature dependence of the Debye temperature of CU_3 Au alloys. Izv.vys.ucheb.zav.;fiz.no.2:14-18 '63.

(MIRA 16:5)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

(Copper-gold alloys—Thermal properties)

ZHDANOV, V.A.; RUBTSOV, V.M.

Dynamics of crystal lattices with regard to nonpoint interaction of atoms. Izv.vys.ucheb.zav.;fiz. no.1:3-9 '62. (MIRA 15:6)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva.
(Crystal lattices)
(Dynamics of a particle)

ZHDANOV, V.A.; KATAL'NIKOV, V.V.

Calculation of the RMS thermal displacement of atoms in a CsCl type crystal lattice by Houston's method. Fiz. tver. tela 4 no.5:1124-1127 My '62. (MIRA 15:5)
(Crystal lattices)

ZHDANOV, V.A.; BRYSNEVA, L.A.

Elasticity moduli for crystals of the wurtzite type. Izv. vys. ucheb. zav.; fiz no.6:95-103 '61. (MIRA 15:1)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.
(Elasticity) (Wurtzite)

ZHDANOV, V.A.; BRYSNEVA, L.A.

Theory of the structure of binary crystals of the wurtzite type.
Izv.vys.ucheb.zav.; fiz. no.3:95-102 '61. (MIRA 14:8)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete im. V.V.Kuybysheva.
(Crystal lattices) (Wurtzite)

37524

S/181/62/004/005/008/055
B102/B138

24.7500

AUTHORS: Zhdanov, V. A., and Katal'nikov, V. V.

TITLE: Calculation of the mean square of thermal displacement of atoms in a CsCl-type lattice using Hauston's method

PERIODICAL: Fizika tverdogo tela, v. 4, no. 5, 1962, 1124-1127

TEXT: The mean square of displacement of atoms from their equilibrium position is calculated from the spectrum of normal vibrations, which is determined by Hauston's method. The results are compared with those obtained with a spectrum calculated according to Montroll (Phys. Rev., 115, 18, 24, 1959). The mean square amplitudes of thermal vibrations obtained from X-ray reflection intensities can be used to determine the binding forces in crystals, since there exists a relation between $\overline{u^2}$ and the binding energy. Here the interactions within the first and second coordination spheres are taken into account. First the interaction parameters are determined for a CsCl-type lattice by Hauston's and Montroll's methods.

Then $\overline{u^2}(T)$ is calculated using the relation

Card 1/3

Calculation of the mean square of ...

$$\overline{u^2}(T)=A\int\frac{1}{\omega}\left(\frac{1}{e^{\frac{h\omega}{kT}}-1}+\frac{1}{2}\right)g(\omega)\,d\omega, \qquad (2),$$

where $A=\frac{h}{m}$, $g(\omega)$ is the frequency density distribution of the lattice vibrations

$$g(\omega)=\sum_s b_s\left(k^2\frac{dk}{d\omega}\right)_s, \qquad (3)$$

which holds according to Hauston (Ref. 2: Phys. Rev., 104; 42, 1956). Numerical calculations were carried out for three directions with

$$b_{[100]}=0.09803;\quad b_{[111]}=0.08823;\quad b_{[100]}=0.15685.$$

For the binding parameters $\gamma+\delta+\gamma\delta>0$ is valid. The numerical values for δ and γ were taken from Ref. 2, and $\overline{u^2}(T)$ was calculated for T=77°K and T=290°K at θ = 150°K. $\Delta\overline{u^2}$ decreases exponentially with increasing

Card 2/3

24.7100

S/139/62/000/001/001/032
E032/E114

AUTHORS: Zhdanov, V.A., and Rubtsov, V.M.

TITLE: On the dynamics of crystal lattices with finite interacting atoms

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.1, 1962, 3-9

TEXT: It is pointed out that classical models of a solid, in which the atoms at the lattice sites are assumed to have negligible dimensions, are insufficient to describe the properties of valence crystals in which the mutual orientation of the constituent atoms is important. Attempts to take into account the finite size of the atoms and the associated effects are said to have been equivalent to the introduction of certain 'additional' degrees of freedom for each atom, describing the polarisation, orientation, and so on, of the atoms. In the present paper the fact that the atoms are not point objects is allowed for by assuming that translational and rotational displacements from the equilibrium position give rise to a change in the potential energy of each atom. The interaction matrix is

Card 1/2

On the dynamics of crystal lattices... S/139/62/000/001/001/032
E032/E114

derived on the harmonic approximation and its properties are discussed. The equations of motion of a finite-atom lattice are then examined and general expressions are obtained for the vibrational spectrum of a lattice with nearest-neighbour interactions. It is shown that this does not lead to a change in the limiting frequencies as compared with the point-atom model. It is expected that when second neighbours are allowed for, a different limiting frequency will be obtained. However, the problem involves the solution of a set of two matrix equations which lead to a complicated secular equation. This makes it difficult to derive any further specific predictions. The paper is entirely mathematical; no numerical calculations are reported.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva (Siberian Physicotechnical Institute at Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: October 6, 1960

Card 2/2

ZHDANOV, V.A.; BRYSNEVA, L.A.

Moduli of elasticity in crystals having a sphalerite or wurtzite structure. Kristallografiia 6 no.4:639-641 Jl-Ag '61. (MIRA 14:8)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.
(Sphalerite) (Wurtzite) (Crystal lattices)

ZHDANOV, V.A.; RUBTSOV, V.M.

Remarks on central forces in crystals. Izv.vys.ucheb.zav.; fiz. no.1:165-166 '61. (MIRA 14:7)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.
(Lattice theory)

ZHDANOV, V.A.; RUBTSOV, V.M.

Theory of the moduli of elasticity of crystals. Izv.vys.ucheb.zav.; fiz. no.1:168-169 '61. (MIRA 14:7)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.
(Elasticity) (Crystal lattices)

ZHDANOV, V. B.

Viticulture

Cultivation of vine seedlings; Sad. i og. no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

SAVENKO, Yu.F., gornyy inzh.; ZHDANOV, V.F., gornyy inzh.

Rubberized rollers substitute for guide shoes. Ugol' Ukr. 4 no.7:34 Jl '60. (MIRA 13:8)
(Hoisting machinery)

ZHDANOV, V.G.

21(4); 17(0) PHASE I BOOK EXPLOITATION SOV/2808

International Conference on the Peaceful Uses of Atomic Energy. 2d, Geneva, 1958

Doklady sovetskikh uchenykh; radiobiologiya i radiatsionnaya meditsina (Reports of Soviet Scientists; Radiobiology and Radiation Medicine) Moscow, Izd-vo Glav. upr. po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR, 1959. 429 p. 8,000 copies printed. (Series: Vtoraya Mezhdunarodnaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii. Trudy, tom 5)

General Ed.: A.V. Lebedinskiy, Corresponding Member, USSR Academy of Medical Sciences; Ed.: Z.S. Shirokova; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This book is intended for physicians, scientists, and engineers as well as for professors and students at vtuzes where radiobiology and radiation medicine are taught.

COVERAGE: This is Volume 5 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held on September 1-13, 1958, in Geneva. Volume 5 contains 32 reports edited by Candidates of Medical Sciences S.V. Levinskiy and V.V. Sedov. The reports cover problems of the biological effects of ionizing radiation, future consequences of radiation in small doses, genetic effects of radiation, treatment of radiation sickness, uses of radioactive isotopes in medical and biological research, uses of atomic energy for diagnostic and therapeutic purposes, soil absorption of uranium fission products, their intake by plants, and their storage in plants and foodstuffs. References accompany each report.

Reports of Soviet Scientists (Cont.) SOV/2808

Gulyakin, I.V., and Ye.V. Yudintseva. The Plant Intake of Strontium, Cesium, and Other Fission Products and Their Storage in the Crops (Report No. 2511) 357

Dubinin, N.P. Mechanism of the Radiation Effect on Heredity and the Problem of Radiosensitivity (Report No. 2074) 378

[illegible], G.G., and K.A. Arsen'yeva. Cytogenetic Effect of Ionizing Radiation in Nuclei of Resting Corn Cells (Report No. 2476) 385

Alikhanyan, S.I., K.P. Serina, S.Yu. Gol'dat, L.I. Yerokhina, V.G. Zhdanov, E.I. Zhdanova, O.N. Kapitonova, F.I. Kleyzikova, S.Z. Mindlin, A.I. Prokof'yeva-Bel'govskaya, and A.P. Teteryatnik. Genetic Effect of Radiation and the Selection of Microorganisms Producing Antibiotics (Report No. 2493) 396

AVAILABLE: Library of Congress (QC770.I53)

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620013-7"

ZHDANOV, V.G.; ALIKHANYAN, S.I.

Use of fast neutrons in selecting Actinomyces erythreus, the producer of erythromycin. Radiobiologiia 4 no.2:313-321 '64.
(MIRA 18:3)

1. Institut atomnoy energii imeni Durchatova, Moskva.

IL'INA, T.S.; ZHDANOV, V.G.

Use of actinophage for the production of a phage-resistant strain of erythromycin producer. Mikrobiologiia 33 no.3:516-521 My-Je '64. (MIRA 18:12)

1. Institut atomnoy energii imeni I.V.Kurchatova AN SSSR.
Submitted April 21, 1963.

BR

ACCESSION NR: AP4027986 S/0205/64/004/002/0313/0321

AUTHOR: Zhdanov, V. G.; Alikhanyan, S. I.

TITLE: Use of fast neutrons in selecting an Actinomyces erythreus erythromycin producer

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 313-321

TOPIC TAGS: Act. erythreus, erythromycin producer, fast neutron selection, induced Act. erythreus variant, fast neutron dose (10 to 60 kr), ultraviolet irradiation, diethylsulfate treatment, variant antibiotic activity, fast neutron dose RBE

ABSTRACT: The present study was conducted to test the effectiveness of using fast neutrons to induce Act. erythreus variants with high antibiotic activity and to compare these variants with those induced by ultraviolet irradiation, diethylsulfate (DES) treatment, and DES treatment combined with ultraviolet irradiation. Suspensions of Act. erythreus spores in plexiglass tumblers were placed into special lead containers and irradiated with fast neutron doses (10 to 60 kr) for a maximum of 6 min at 33 to 34°C. After irradiation the suspensions were sown on an agar corn medium and antibiotic activity of colonies

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ACCESSION NR: AP4027986

was determined 10 days later. On the basis of fast neutron dose RBE, the effects of various fast neutron doses (10 krad and 40 krad) were compared with those of corresponding ultraviolet radiation doses (1000 erg/mm^2 and 4000 erg/mm^2). Other experiments investigated the effects of diethylsulfate treatment (1:100 solution) of Act. erythreus spores for 30 min and 60 min periods and also the effects of this treatment in combination with ultraviolet radiation (1500 erg/mm^2 dose) and fast neutron doses (10, 20, and 30 krad doses). Experimental data show that the largest number of variants with high antibiotic activity was induced by fast neutrons. An Act. erythreus strain (IAE-1efu) with 60 to 70% higher antibiotic activity than in initial strain LS-E2577 was produced by use of fast neutron selection. Orig. art. has: 6 figures and 5 tables.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova, Moscow (Atomic Energy Institute)

SUBMITTED: 16Jul63 ENCL: 00

SUB CODE: LS NR REF SOV: 003 OTHER: 004

Card 2/2

ZHDANOV, V. G.

"A comparative study of the effect of different mutagens on actinomyces erythreus, producing erythromycin."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

Inst Atomic Energy im I. V. Kurchatov, Moscow.

ZHUKOV, V. G.; NAVASHIN, S. M.

"Comparative evaluation of antimicrobial effect of some semisynthetic penicillins in vitro and in vivo."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

All-Union Res Inst of Antibiotics, Moscow.

ZHDANOV, V.G.

Combined effect of chemical and physical factors in the selection of erythromycin producers. Trudy Inst. mikrobiol. no.10:164-168 '61. (MIRA 14:7)

(ACTINOMYCES) (ERYTHROMYCIN)
(ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT) (ETHYLENIMINE)

17(0)

AUTHORS: Alikhanyan, S. I., Zhdanov, V. G. SOV/20-125-6-50/61

TITLE: The Effect of Combined Application of Physical and Chemical Mutagenic Agents Upon Mutations in Polygenic Systems of Microorganisms (of Actinomyces erythreus, the Producer of Erythromycin) (Vliyaniye kombinirovannogo vozdeystviya fizicheskikh i khimicheskikh mutagenov na mutatsii v poligennykh sistemakh mikroorganizmov (produtsenta eritromitsina Actinomyces erythreus))

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 6, pp 1353-1355 (USSR)

ABSTRACT: The frequency of the mutations in the case of Aspergillus terreus caused by ultraviolet radiation can be increased by a previous treatment of the conidia with an aqueous solution of the nitrous yprite form, i.e. bis-β-chloro-ethyl-amine . HCl (MBA) (Ref 1). Though 0.1% of MBA did not initiate the mutations, it reacted chemically with the nucleus- and plasma content of the spore. It is known that this content determines the heredity: the mentioned reaction renders this content more mutable in the case of the ultraviolet irradiation. The number of the mutations increased (in single cases by the 300-400 fold), and the maximum was earlier reached than in the case of the

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The Effect of Combined Application of Physical and Chemical Mutagenic Agents Upon Mutations in Polygenic Systems of Microorganisms (of Actinomyces erythreus, the Producer of Erythromycin) SOV/20-125-6-50/61

ultraviolet rays alone (Ref 2). Ethylene imine (EI) shows in the case of Streptomyces aureofaciens and S. griseus a similar, though weaker effect (Ref 3). .The authors investigated the combined effect of EI and of the ultraviolet- as well as of the X-rays upon the selection in order to increase the formation of the antibiotic in the case of the culture Nr 221 of Act.erythreus. The activity of the initial culture amounted to only 450-500 units. The spores, suspended in distilled water were stored 24 and 48 hours long in an EI-concentration of 1:15000 at 3 and 5° and then treated with a dose of ultraviolet rays (250-2000 erg/mm^2) (lamp - Ref 4) or of X-rays 50-300 kr. The activity of the control and of the chemically pre-treated culture was estimated by fermentation in a soybean medium. The tables 1-3 show the results. (Table 3 - some new cultures). The following definite conclusions are drawn from the obtained results: 1) Hereditarily stable active variants could be obtained only in the case of the effect of mutagenic factors on the spores. 2) The combination EI → ultraviolet rays is the most effective combination for the production of mutation changes in the poly-

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The Effect of Combined Application of Physical and Chemical Mutagenic Agents Upon Mutations in Polygenic Systems of Microorganisms (of Actinomyces erythreus, the Producer of Erythromycin) SOV/20-125-6-50/61

genic system of Act. erythreus. It gave the highest percentage of morphological mutations. Since these results agreed with those of Act. aureofaciens and Str. griseus (Ref 3) the authors say that this combination is the most effective one. This mutagenic combination has to be tested in the case of a producer of another antibiotic in order to be able to draw definite conclusions. There are 2 tables and 4 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov (All-Union Scientific Research Institute of Antibiotics)

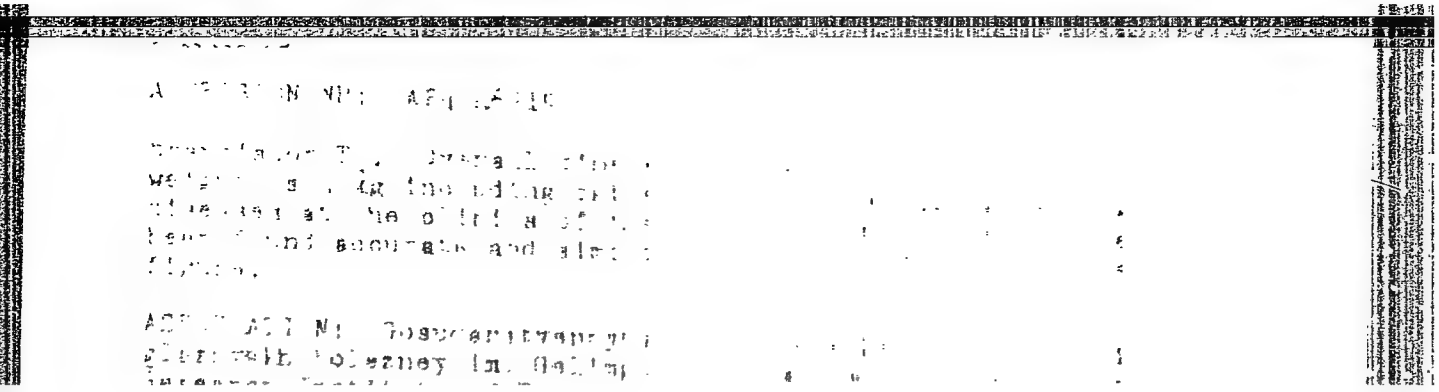
PRESENTED: December 24, 1958, by N. V. Tsitsin, Academician

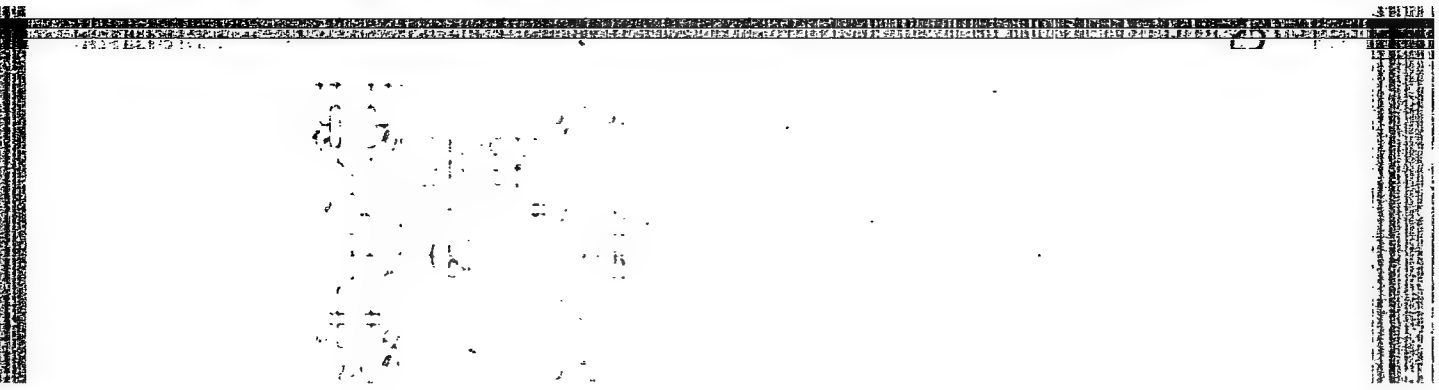
SUBMITTED: December 22, 1958

Card 3/3

ARKHIPOV, A.M., inzh.; ZHDANOV, V.I., inzh.; ROGATSKIN, B.S., inzh.

Prestart cleaning of water and steam conduits of a 300 Mw. [redacted] Elek. sta. 36 no.11:14-20 N '65. (MIRA 18:10)





APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064620013-7"

BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.; ZHDANOV, V.K.

Retina potential induced by electric current (ERRG). Biofizika 9 no.6:701-709 '64. (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznykh bolezney imeni Gel'mgol'tsa, Moskva.

ZHDANOV, V.K.

Our participation in the administration of work. Razved. i okh. nedr 29 no.5:63 My '63. (MIRA 16:7)

1. Irkutskoye geologicheskoye upravleniye.
(Prospecting)

BARKAN, Vitaliy Fishelevich; ZHDANOV, Vasiliy Konstantinovich; CHISTYAKOV, N.I., professor, doktor tekhnicheskikh nauk, retsenzent; ZUDAKIN, A.I., inzhener, redaktor; PETROVA, I.A., izdatel'skiy redaktor; ZUDAKIN, I.M., tekhnicheskiy redaktor

[Radio receiver apparatus] Radiopriemnye ustroistva. Moskva, Gos. izd-vo obor. promyshl., 1956. 495 p. (MLRA 9:12)
(Radio--Receivers and reception)

BELOTSERKOVSKIY, Grigoriy Bentsionovich; BABKIN, N.I., inzh., retsenzent; ZHDANOV, V.K., inzh., retsenzent; KALANTAROV, M.N., inzh., retsenzent; TELEZHKO, M.I., inzh., retsenzent; FAKTOROVICH, M.D., inzh., retsenzent; FEDOTOV, M.D., inzh., retsenzent; SAMOYLOV, G.V., inzh., red.; IVANOV-TSYGANOV, A.I., kand. tekhn. nauk, red.; BOGOMOLOVA, M.F., red. izd-va; ROZHIN, V.P., tekhn. red.

[Antennas]Antenny. Izd.2., perer. i dop. Moskva, Oborongiz, 1962. 491 p. (MIRA 16:2)
(Antennas (Electronics))

ZHDANOV, V.K.

PHASE I BOOK EXPLOITATION SOV/4421

Barkan, Vitaliy Fedorovich, and Vasiliy Konstantinovich Zhdanov

Radiopriyemnyye ustroystva (Radio Receivers) 2nd ed., rev. and enl. Moscow, Oborongiz, 1960. 465 p. 30,000 copies printed.

Ed.: A.I. Zudakin, Engineer; Managing Ed.: S.D. Krasil'nikov, Engineer; Ed. of Publishing House: O.N. Burakova; Tech. Ed.: V.P. Rozhin.

PURPOSE: This book has been approved as textbook for the radio engineering courses in the tekhnikums by the Ministry of Higher and Secondary Specialized Education, USSR. It may also be used for correspondence courses.

COVERAGE: The textbook is based on lectures delivered in tekhnikums by the authors for a number of years. It examines the operational principles and the basic design of components of radioandaudio-frequency radio receiver channels with special emphasis on radar receivers. The authors discuss the physical processes occurring in the components, the mathematical analysis of these phenomena and, when necessary, the designs of the components. A new chapter, "Fundamentals of the Instructional Designing of Radar Receivers in the Centimetric Band," has been added to this second edition, and this involved the rewriting of Ch. XIV on "Radar Receivers."

Card 1/9

Ch. I. was written by both authors jointly; Chs. II, III, IV, VII, VIII, XII, XV and section 88 of Ch. XIV were written by Engineer V.K. Zhdanov; Chs. V, VI, IX, X, XI, XIII, XIV and XV by Engineer V.F. Barkan. The authors thank Engineers L.L. Reyfman and V.F. Romanenko for their useful advice on the manuscript and A.I. Zudakin, editor of the textbook. There are 38 references, all Soviet (including 10 translations).

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History of the Development of Radio Receiver Engineering 5

Ch. I. General Information on Radio Receiving Systems
1. Use and classification of radio receivers 9
2. Basic indices of radio receivers 9
3. Block-diagram of straight amplification 11
4. Block-diagram of a superheterodyne receiver 15
5. Methods of investigating the circuits of a radio receiving scheme 17

18

BARKAN, Vitaliy Fedorovich; ZHDANOV, Vasiliy Konstantinovich; CHISTYAKOV, N.I., doktor tekhn. nauk, retsenzent; LEVITIN, Ye.A., inzh., retsenzent; SAMOYLOV, G.V., inzh., red.; STARIKOV, Ye.P., inzh., red.; SUVOROVA, I.A., red.izd-va; NOVIK, A.Ya., tekhn. red.

[Design of radio systems] Proektirovanie radiotekhnicheskikh ustroistv. Moskva, Oborongiz, 1963. 514 p. (MIRA 17:1)

ZHDANOV, V.K.; BOGOSLOVSKIY, A.I.; SEMENOVSKAYA, Ye.N.

Electronic low-frequency analyzer and its use in electroretinography. Biul. eksp. biol. i med. 51 no.5:121-124 My '61. (MIRA 14:8)

1. Iz laboratorii fiziologicheskoy optiki imeni S.V.Kravkova (rukovoditel' A.V.Roslavtsev) Nauchno-issledovatel'skogo instituta glaznykh bolezney imeni Gel'mgol'tsa (dir. A.V.Roslavtsev), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.
(ELECTRORETINOGRAPHY--EQUIPMENT AND SUPPLIES)

ZHDANOV, V.K.; SEMENOVSKAYA, Ye.N.

Human electroencephalogram recorded during stimulation of the eyes by square electric pulses [with summary in English]. Biofizika 2 no.6:724-733 '57. (MIRA 10:12)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut glaznykh bolezney im. Gel'mgol'tsa, Moskva.
(ELECTROENCEPHALOGRAPHY)(EYE)

ENGLIN, N.I., inzh; ZHDANOV, V.L., inzh.

New equipment for making circular reinforced concrete liners for vertical shafts. Shakht. stroi. 5 no.5:20-23 My '61. (MIRA 14:6)

1. TSNIIpodzemshakhtostroy.
(Mine timbering) (Precast concrete)

ZHDANOV, V.M.

Virology and immunology at the Eighth International Cancer Research Congress. Vop.virus. 7 no.6:757-757 N-D '62. (MIRA 16:4)

(ONCOLOGY--CONGRESSES)

ZHDANOV, V.M., prof.

Mechanism of the virus and cell interaction. Sovet. med. 27 no.9:6-11 S '63 (MIRA 17:2)

1; Deystvitel'nyy chlen AMN SSSR.

ZHDANOV, V.M.

Virology at the Eighth International Congress of Microbiology.
Vop.virus. 7 no.6:755-756 N-D '62. (MIRA 16:4)
(VIROLOGY--CONGRESSES)

ZHDANOV, V.M.; BUKRINSKAYA, A.G.

Effect of actinomycin D and aurantin on the multiplication of some myxoviruses. Vop. virus 8 no.2:230-232 Mr-Ap'63
(MIRA 16:12)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.

"Transport phenomena in a partially ionized gas with different temperatures of the components".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64

ALIYEVSKIY, M.Ya. (Sverdlovsk); ZHDANOV, V.M. (Sverdlovsk)

Transfer equations for a nonisothermal multicomponent plasma.
PMTF no.5:11-17 S-O '63. (MIRA 16:11)

ZHDANOV, Vladimir Matveyevich; ROMANNIKOV, F., red.; KARZHAVINA, Ye., tekhn.red.

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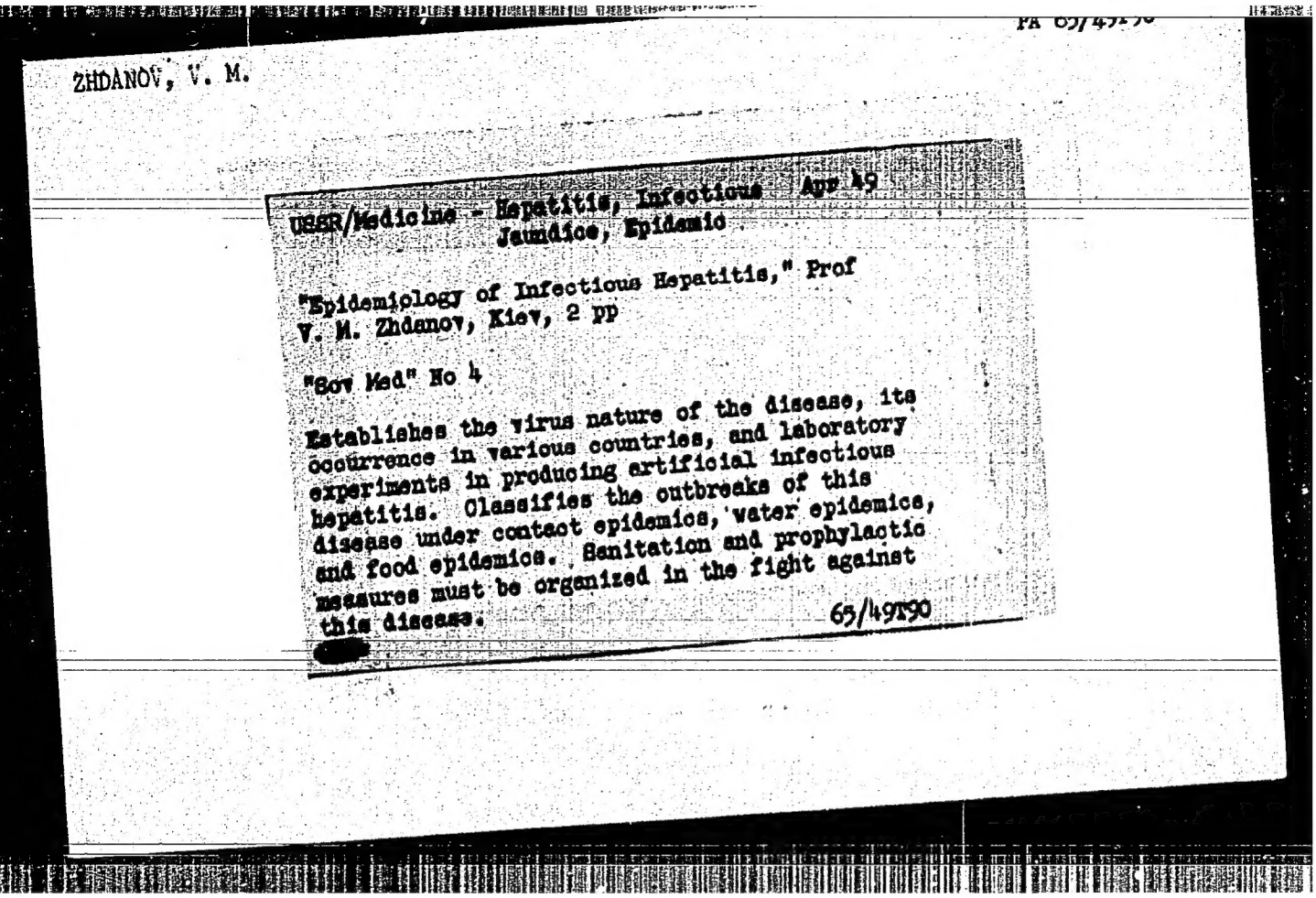

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